Viola obliqua Hill and other violets

EUGENE P. BICKNELL

Viola obliqua—the name is become anathema! Venerable indeed, yet from of old misunderstood even by those who have sought to do it honor, rejected, reinstated, and at last altogether cast out, it may be deemed a matter for apology that it should be now once again brought forward. Nevertheless I ask a further hearing in its behalf—the fraternity of violarians must be my judge.

The name seems first to have emerged into the modern light in the Illustrated Flora. If recollection be not at fault, I myself had some part in this. And the view then shared with the author of that work, Hill's illustration before us, that this discredited name was perfectly available for exact use, has not suffered any change. I have not turned to Hill's much ridiculed plate from that day until this writing, nor do I suppose that Doctor Britton has, yet, viewing it together now we are at agreement as before.

More redoubtably than any other writer, more picturesquely, Doctor Greene has used his slings and arrows against this name.* Yet, as his page presently allows us to see, with friendly purpose! His onslaught—assuredly not to be withstood—finally by a hairs-breadth evades a fatal issue. With fine dexterity the all but destroyed thing has been rescued and, on the instant, sent forth with now well-established rights—for how shall it ever again be assailed with better success? Yet somewhere was a miscalculation. Later writers, and there have appeared not a few, have approved the name as extinct, perhaps not stopping to apprehend this reinstatement or the dryness of Doctor Greene's closing avowal " the most common of all East American violets . . . I am confident it can never be proven that it is not *Viola obliqua* Hill."

Doctor Greene has made his hypothetical objector say of Hill's plate that " it does not half represent any violet that ever grew in any country. It is glaringly false in representing flowers erect on

* Pittonia 3: 142–143. 1896.

peduncles perfectly straight to the very summit." Thus is the overtechnical critic at first gaily allowed his fling. But this imagined sceptic need have made less allowance for the "unbotanical draughtsman" than it is implied he should have done. Had Doctor Greene's keen eye ever scanned the woodland floor among the hills along the Hudson, or on Long Island, it must have seen in apparition before it this same pictured violet of Hill's side by side with its living counterpart having flowers postured in the self same upwardly oblique way and even strictly erect! Here then was the living vindication of *Viola obliqua* Hill and Sir John had waited nearly a century and a half to be put in credit. The surprising thing is that his figure ever should have come under any doubt. It utters authenticity. Its entire composition proclaims that it could have been in no part extemporized. Beyond peradventure we see in it the copy of an actual plant worked over by a conscientious but not a facile draughtsman. No inattentive sketch, no artist's fiction, would have been cumbered with the needless and inartistic detail shown in this cut nor, like it, reveal the painstaking effort of a careful but none too practised hand. Nor, as to the flowers should it have been forgotten that Hill put in print, and he had the living plant, that they were "oblique," and Aiton that they were "erect." I do not know whether this violet remained in cultivation in England up to the time when Aiton wrote or whether he had ever seen it in growth. But if his description was drawn up from herbarium specimens having the petals partly discolored from drying it offers an explanation of his use of the word *straminea* in giving the color of the flowers. By fault of this word, nothing else can explain it, the history of the blue-flowered *Viola obliqua* has come confusingly in touch with violets so remotely related to it as the white- or creamy-flowered *Viola blanda* and the yellow-flowered *Viola rotundifolia*.

As for our plant which so perfectly upholds Hill's illustration I doubt not that it may be found bearing its upwardly looking flowers over a far wider range than where I myself have seen it growing, for it is none other than the common violet we have been taught to call *Viola affinis* LeConte. The Illustrated Flora was therefore right in restoring the name *Viola obliqua*, although

not drawing the specific lines so closely as we may now do; Doctor Greene was right in supporting the name with his endorsement; Mr. Pollard in Britton's Manual was exactly right in allowing Hill's name to displace LeConte's. Notwithstanding all this the name *Viola obliqua* will be searched for in vain in the violet writings of the day.

The plant figured by Hill was not that extreme form of the species of slighter figure and narrower leaf that we seem to have set up as typical of *Viola affinis*. But it was of the same flexuous habit, the same grouping of foliage and flower, the same deep cordation and acuteness of the expanded leaf; the blades had the same pronouncedly crenate-serrate marginal pattern, and some of them were quite sufficiently narrow and attenuate to satisfy the most exacting *affinis* standard. It is no objection that other leaves were broadly ovate. Forms of the species, very usual forms, do produce just such broadly ovate leaves and in like way associated on the same plant with the more characteristic narrower ones. Such plants, and others much more strongly grown than the medium plant portrayed by Hill, are not possibly to be kept distinct by a name from the most reduced and delicate forms of the series, for the extreme phases are everywhere inextricably blended together through every avenue of intergradation.

It must not be inferred that there is a particular form of *Viola obliqua* in which the flowers at some stage of their growth always become upturned. This trait of the flower is no more than a tendency in the general species which, in some plants, or colonies of plants, may be perfectly realized, while in others it is not seen at all or proceeds no further than an opening out of the crooked tip of the peduncle causing the flower to stand away from the scape in a horizontal or an upwardly oblique position just as it may in many another violet. Nor is the erect position of the flower at all extraordinary among violets. It is occasionally seen in other species although in no other known to me does it come to a well-established trait, and in no other than this, except rarely, have I seen the flowers strictly "erect or peduncles perfectly straight to the very summit."

Just as our medium plant passes down into its smaller and more delicate forms so also, and with as gradual transformation, does it grow up into an every way larger violet having thicker

leaves, obtuse and of less pronounced crenation, and more striking flowers of deeper hue and bluer tone of color. Of late years much has been made of this larger violet, and forms which cluster about it, under the designation *Viola papilionacea* Pursh.

Let us digress upon this rather ostentatious newcomer among our named violets. For myself I have never quite succeeded in finding out what was the touchstone of "*Viola papilionacea.*" Nor does there appear to be perfect accord among its sponsors as to its exact credentials. Mr. Pollard in first taking up the name* introduced us to a wholly glabrous plant, describing accurately the fine violet to which we have just adverted. But the specimens he put out† were at some discord with his description, showing us a violet having a characteristic pubescence on the petioles. In respect of this pubescence the specimens coincide with Doctor Greene's understanding of "*papilionacea*"‡ and with the admirable drawing of Mr. Holm which supplements his description. Mr. Stone, both by description and illustration, reports the plant as bearing pubescence on the petioles.§ Mr. House as well.‖ Doctor Brainerd, on the other hand, although taking a broader treatment, seems more in accord with Mr. Pollard in his description of a wholly glabrous plant** as also is Doctor Dowell††—something like an even division between the smooths and the roughs. All this is not making too much of a little pubescence, for the glabrous and the pubescent plants differ by far more than this one character. And the strain of discrepancy running through the discussions of "*papilionacea*" is reason enough why this conjectural species has not been received by all of us with any such compelling sense of recognition as, for instance, all felt towards "*Viola cucullata*" the instant that Doctor Greene gave us the cue.

The glabrous "*papilionacea*" is found on grassy banks or at the borders of meadows along descending places from woodlands

* Bot. Gazette **26**: 136. 1898.

† North Am. Violaceae. Determined and distributed by Prof. Edward L. Greene and Mr. Charles Louis Pollard, No. 8.

‡ Pittonia **4**: 140–141. 1900.

§ Proc. Acad. Nat. Sci. Phila. **55**: 670–671. 1904.

‖ Bull. Torrey Club **32**: 258. 1905.

** Rhodora **6**: 15. 1904; Bull. Torrey Clu **3** : 590. 1910.

†† Bull. Torrey Club **37**: 164. 1910.

where *Viola obliqua* grows. In these near meadows or by brooks that traverse the same woodlands "*Viola cucullata*" raises its long-stemmed flowers of twofold blue. In many ways the smooth "*papilionacea*" is strikingly intermediate between these two plants. Doctor Brainerd has opened our eyes to violet hybrids. Have we not found one here? I recall all these violets as they grew in profusion about my former home on the Hudson and seem to see, I did not see it then, our woodland and our meadow violet meeting in such places as I have described and crossing over into each other—how else than through free hybridization? And the perplexing intermediate examples that I had then tried to sort into species seem, as the specimens are turned to now, to lend strong confirmation to such an hypothesis. If, then, we have indeed here come upon the truth, our "*papilionacea*" is seen to be not all that we have been asked to believe. Yet by this very reduction it takes a clearer outline as a plant marked by a characteristic hairiness on the convex side of the petiole, often localized just below the blade, but often, also, thinly diffused on the lower surface of the lamina, precisely as Mr. Holm's drawing so faithfully portrays. The upper face of the blade is by no means always glabrous, but what pubescence may later appear there is not often very obvious. By this at first strictly dorsal pubescence it is a marked plant, for it should be noted of the glabrous "*papilionacea*"—whether the hybrid, if so it proves to be, or the enhanced *Viola obliqua*—that the slight pubescence it may sometimes show has its site on the upper surface of the blade just where we find evidences of it in the nearly glabrous *Viola cucullata*. It is a marked plant also, in its group, by deeply cordate and crenate-dentate leaves which in age so open out their cordation as to become subtruncate at the base, and it is an especially noteworthy violet by reason of a ready tendency to semi-domestication.

It will be well here to turn to yet another one of our violets, the pubescent *Viola sororia* Willd. In woodlands wherein this species and *Viola obliqua* are in free growth together they may be found, it is no uncommon thing, blending the one into the other in perfect confluence. Among these plants of mixed strain we recognize, now *Viola obliqua*, changed only by the beginnings of

pubescence, now its too intimate associate, still to be called *Viola sororia* but taking a more gracilent habit and narrower form of leaf. More intermediate in the series are plants of stronger growth and in these we seem to see our pubescent "*papilionacea*," never, perhaps, exactly as we know it in its semi-domesticated state but so much the same that the origin of our plant would seem to be disclosed as though in an open book. We have been here freely following appearances and may have been easily mislead in thus seeming to have traced our plant back to the mode of its beginning. Nothing like demonstration has assured us. But, if it were indeed a proved thing, even then our semi-domesticated "*papilionacea*," far along in its generations, would be manifestly of a higher category than those chance hybrids we seem to come upon in the making. Our plant thrives in places whence both of its suggested parents have disappeared, or perhaps have never been. It is become independent of the parental aid, is self perpetuating. It is, by continuous descent from season to season, no longer a hybrid, but rather a species whose hybrid origin goes back —how far we may not know. Such a plant is surely to be accorded its own distinctive name. I have not found that such a name has ever been given unless the pleasing one *Viola laetecaerulea* of Doctor Greene may happily prove to be available.

Most certainly we cannot continue to call this plant *Viola papilionacea* Pursh. We turn to Pursh and read under this name, it is so clear we cannot be mistaken, the quite sufficient description of no other violet than our common one of boggy meadows and wet places that we have been calling *Viola cucullata* Aiton. Of this violet there is an open meadow form, it has doubtless been remarked by all of us who have given any field attention to violet matters, that has definable points of difference from more usual phases of the plant and this, may we not say unmistakably, is the form more particularly held in view by Pursh. In my collections formerly made about Van Cortlandt Park I find specimens of this plant put aside as far back as 1895 under a herbarium name given with reference to the notably triangular cordate and acute leaves well-developed as early as the time of flowering. The leaves are not strongly cucullate nor strictly glabrous nor is their marginal pattern at all pronounced ("*triangu-*

laricordatis acutis crenatis subcucullatis glabriusculis"—Pursh's description could scarcely be more exact); the peduncles, at flowering, little if at all surpass the leaves in height (*pedunculis longitudine foliorum*); the flowers, compared with those of the *Viola obliqua* series, are explicitly more papilionaceous, allowing for the fanciful application of this adjective to the flower of a violet, ("*petalis obovatis: 3. inferioribus infra medium barbatis conniventibus, 2. superioribus reflexis*").* Point by point Pursh's description meets the distinctive characters of this plant, proving slightly inexact only in respect of the variable bearding of the petals, for the odd one, although sometimes slightly bearded, is prevailingly glabrous. The bearding dusted with pollen readily becomes Pursh's "yellow down." "Flowers blue, elegantly striated," points with unmistakable indication to the flowers of our meadow violet distinguished above all others by the delicacy and sharp beauty of their dark penciling. "In wet places" would scarcely be particularly affirmed of any other blue-flowered heart-leaved violet, although Pursh does say of his other one "In grassy wet places," wherein, however, is more of a distinction than might appear to one not well knowing our violets in the places where they grow. Upon the face of the evidence this other violet of Pursh's, his "*Viola cucullata* Ait.," was our *Viola obliqua*. Its glabrous leaves, cucullate only at the base, had more prominently indentured margins than the crenate leaves of his *Viola papilionacea*, he expressed the difference by calling them "serrate"; the scapes were shorter, an essential distinction; the petals were obliquely bent, therefore the upper pair less characteristically reflexed and the others more open. The two plants are thus placed by Pursh in unmistakable apposition. The lateral petals are described as being merely "bearded," not, as in his *papilionacea*, "*infra medium barbatis*," an acute distinction, not to bear a too literal rendering, but quite true in the sense that the bearding in the one species is more restricted and relatively more basal on the petal than in the other. Mr. Stone is, I think, the only recent writer who has called attention to the more forward extension of

* It should be said that this description applies more particularly to the flower in its earlier and its later stages—I know of no violet the flower of which at the stage of fullest development is not more or less widely expanded.

the bearding in *Viola obliqua*—his *Viola affinis*.* "Flowers blue, white at their base," points also to *Viola obliqua* for, while the *petals* of all these violets are white at their base, the *flowers* of this one are lighter towards the throat where those of our "*cucullata*" are characteristically of deeper hue, often in sharp contrast with the pale blue surrounding parts.

It is not to be believed that Pursh did not know both of these common violets, and I have been at pains to determine and to lay stress upon each of his described species the better to emphasize the identity of his *Viola papilionacea*, for it would appear that by right of priority this is the true name of our meadow violet that we have been miscalling *Viola cucullata* Ait.

If a decade and more ago we knew as much about our violets as we know today, however scant our present knowledge may be, Aiton's *Viola cucullata* would scarcely have been construed in terms of our meadow violet that, as we have just seen, Pursh called *Viola papilionacea*. Doctor Greene in pointing out to us this distinct but long hidden species did not adopt for it a doubtfully applicable name without using a deliberate mark of interrogation.† However unmistakable the description of any later author may be, there is not one word by Aiton himself that can be deemed distinctive of this plant. Quite otherwise. His *Viola cucullata* had, for instance, subterete scapes shorter than the leaves, which were attenuate at the apex, and the petals, the upper pair not being reflexed, were white at their base. His entire description differs in no essential from the description of Hill's *Viola obliqua*, nor does it fail at any point to apply to that plant. That species must have been the very one he had before him but, believing Hill's plant to be characterised by erect flowers, partly stramineous in color like some of the European species, he very naturally considered his own plant to be distinct by reason of blue inverted flowers on scapes reflexed at the apex, which characters, although common to all violets, he is particular to report. Can it be doubted that the name *Viola cucullata* Aiton is but a synonym of *Viola obliqua* Hill and that our meadow violet that we have allowed to bear Aiton's name should now inherit from Pursh the name *Viola papilionacea?*

* Loc. cit., p. 671.

† Fittonia 3: 143. 1896.

Yet another violet should here receive a word. Little recognition has been accorded to *Viola domestica*. I ask myself, Can it be alone from force of first impressions that this violet remains to me one of the most individualized and set apart species of its group? No other one is altogether glabrous. I have given the closest scrutiny to very many growing plants and failed to detect on even one so much as a single hair. Rare examples viewed by lens do show some obscure appressed spiculae near the margin of the leaf on its upper face, but such plants are so unusual as to suggest some admixture in the strain. By this rather remarkable absence of pubescence this violet is at marked variance from the one that has been combined with it under "*papilionacea*," in which some dorsal hairiness on the leaf is so constant a character. There is other evidence that these two violets are of collateral rather than lineal relationship. In more than one direction they disclose an obviously different course of growth. In the pubescent one, I know not what other name to call it by than *Viola laetecaerulea* Greene, the scapes at flowering are erect, bearing the flowers high, even above the leaves, later becoming flexuous or sometimes declined; in *Viola domestica* they are always shorter than the leaves and tend to rise obliquely, sometimes bearing the flowers out around the sides of the tuft. The light green leaves of *Viola laetecaerulea* at flowering time are normally deeply cordate, later becoming dilated and taking a more or less subtruncate base; those of *Viola domestica* are from the first openly cordate or subtruncate and show much less change of form with age. They are of a strikingly bright deep green and when young somewhat succulent and shining. The flowers are unlike those of *Viola laetecaerulea*, or any other violet known to me, having longer more twisted often narrowly rhomboid petals of deeper hue intensifying into a dark true purple. The upper pair when in ultimate position are not only reflexed but deflexed backward by a downward twist from the base. *Viola laetecaerulea* is one of our earliest flowering blue violets, *Viola domestica* the latest of all. While the former is partly domesticated the latter must be, I think, considered as wholly so. It is found by fence rows, in old orchards, yards and abandoned grounds, growing in rich but never in wet soils and in shade or partial shade as if it had come originally from

the woods. But I have never found it in a really wild state, that is to say, never far away from the habitations of man. It is of more gregarious habits than any of our wild species, often colonizing so thickly over wide spaces as to crowd out most other plants and, until taking its strong later growth, is low and somewhat spreading of leaf and peduncle, keeping close to the ground; not least to be noted is its relatively narrow range of variation, which is unusual among the violets of its immediate relationship. It has been classed with "*papilionacea*", although its nearest ally is doubtless *Viola obliqua;* but it is too signally different from that species to be forced upon it. Because hybridization may have at some period entered into the history of *Viola laetecaerulea*, of domestic tendencies, there might be reason for inquiring whether *Viola domestica* had not a like origin, but, if *Viola obliqua* is or was one parent, where is the other?

Should the indications reported in this paper not be mistakenly understood the facts before us would be these: That the name *Viola obliqua* Hill belongs to the common and widely variable violet that we have been calling *Viola affinis* LeConte. That no such species exists as the supposed one we have been calling "*Viola papilionacea*," this being a mixture, partly an accentuated phase of *Viola obliqua*, partly a hybrid of that species with our meadow violet, partly also a cross of *Viola obliqua* with *Viola sororia* and partly a well appointed violet, perhaps descended from such a cross, which may be called, pending proof, *Viola laetecaerulea* Greene. That the *Viola cucullata* of Aiton is a synonym of *Viola obliqua* Hill, and that our meadow violet that we have known as *cucullata* was first described by Pursh, receiving the inalienable name *Viola papilionacea*. That *Viola domestica* is, by attributes of form and habit, invested with a signal individuality and that notwithstanding its domesticated nature the source of its origin does not yet appear.

NEW YORK